

REMARKS

Applicant is in receipt of the Office Action mailed October 20, 2004. Claims 1, 16, 18, 26, and 27 have been amended to more clearly claim Applicant's invention. Thus, claims 1-27 remain pending in the present case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Summary of Telephone Interview with Examiner

On Thursday, January 6, 2005, a telephone interview was held between Examiner Vo and Mark S. Williams (Reg. No. 50,658) in which the prior art of Tao was discussed with respect to the Applicant's claimed invention. Applicant noted that in Tao's system, the pixel count refers not to the size or amount of the acquired image (i.e., the image data), but rather to that portion of the image that represents the object, and further noted that this pixel count is determined by processing or analyzing the image, i.e., the amount of image data acquired with respect to an object is not related to the size of the object. Applicant also noted that in direct contrast, in Applicant's system, image data is acquired and stored as long as sensors detect the presence of the object, and so the resulting amount of stored image data corresponds to the size of the object. The Examiner indicated that he understood this distinction between Tao and the present application, but that he would need to review Tao more closely to confirm. The Examiner stated that the arguments presented by telephone would need to be provided in a written Response. The Examiner also indicated that clarification of the term "amount" in independent claim 1 would help advance the case. Applicant agreed to amend claim 1 and similar independent claims accordingly.

Allowed Subject Matter

The Office Action allowed claims 5-8 and 20-22. Applicant appreciates the allowed subject matter.

Section 103 Rejections

Claims 1-4, 9-19, and 23-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sites et al (US 5,515,159, “Sites”) in view of Tao (US 5,533,628, “Tao”). Applicant respectfully disagrees.

Amended claim 1 recites:

1. A method for acquiring images of variable sized objects in an image acquisition system, wherein the image acquisition system comprises an image sensing device and an image acquisition device, wherein the objects are moving relative to the image sensing device, wherein the method acquires images independent of spacing between the objects, the method comprising:

- (a) the image acquisition device physically detecting presence of a first object;
 - (b) the image sensing device generating image data corresponding to the first object;
 - (c) the image acquisition device initiating storage in memory of the image data corresponding to the first object in response to the image acquisition device detecting the presence of the first object;
 - (d) the image acquisition device physically detecting absence of the first object after detecting presence of the first object; and
 - (e) the image acquisition device discontinuing storage of the image data corresponding to the first object in response to the image acquisition device detecting the absence of the first object, wherein after said discontinuing storage of the image data, the memory comprises a first amount of stored image data corresponding to the first object;
- wherein, after said discontinuing, and prior to image processing, the first amount of the stored image data substantially corresponds to a size of the first object.

Applicant has provided arguments regarding the deficiencies of Sites in previous Responses, which are hereby incorporated by reference. The Office Action attempts to address these deficiencies by combining Sites with Tao. However, Applicant respectfully submits that Tao fails to provide the features and limitations necessary to overcome the deficiencies of Sites, as explained in detail below.

As the Examiner is certainly aware, to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In *re* Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. In *re* Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Moreover, as held by the U.S. Court of Appeals for the Federal Circuit in *Ecolochem Inc. v. Southern California Edison Co.*, an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis. In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings “must be clear and particular Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’.” *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant submits that there is no teaching or suggestion to combine Sites and Tao either in the references or in the prior art. Nowhere does Sites or Tao suggest or even hint at the desirability of recognizing the sizes of objects prior to image processing. Applicant respectfully submits that the Examiner’s stated motivation to combine, i.e., that “doing so would reduce time of computation and cost of the system and be more efficient technique for identifying the object in size (*sic*)” is simply a statement of an improved result by making such a combination, and is thus hindsight analysis, and so Applicant submits that combining Sites and Tao is improper. Moreover, Applicant submits that even were Sites and Tao properly combinable, which Applicant argues they are not, the resulting combination still would not produce Applicant’s invention as represented by claim 1.

For example, the Office Action asserts that Tao teaches that the amount of the stored image data substantially corresponds to a size of the first object *prior to image*

processing, citing col. 4, lines 58-65, and 39 of fig. 2). However, as Applicant noted in the telephone interview summarized above, the pixel count of Tao refers not to the size or amount of the acquired image data, but rather to the subset of pixels *representing the object in the image*. As clearly described in the cited passage, Tao's pixel counts are determined via image analysis after the image has been acquired, i.e., by measuring the pixels of specific hues in the image. Tao estimates the object size by comparing the pixel count of the object (as opposed to the pixel count of the entire image) within the image with various reference pixel counts associated with general sizes (e.g., small medium, large) and then adjusts the hue value based on the size estimate.

Tao's pixel counts are further explained and illustrated in reference to Figures 20A – 20C, described in col. 16. Here, Tao clearly shows that in the image of 20A (the large apple), the image (pixels) are 80% apple, and 20% background, whereas in the image of 20B (the small apple), the image (pixels) are 40% apple, and 60% background. Thus, the pixel counts corresponding to the respective object sizes refer to those pixels in the images that actually represent the objects, e.g., *not* the background. Applicant further notes that such pixel counts are measured by image processing of the acquired images (e.g., based on hue), and thus are not determined “prior to image processing”. Thus, the size or amount of Tao's acquired image data (object pixels plus background pixels) does *not* correspond to the object's size.

In direct contrast, in Applicant's invention as represented by claim 1, since the object's presence and subsequent absence are detected prior to, i.e., independently of, image processing, and since the system continues to store image data until the object's absence is detected, the amount of image data stored corresponds to the object's size. Nowhere does Sites or Tao teach or suggest these features.

Thus, for at least the reasons provided above, Applicant submits that claim 1 and those claims dependent thereon are patentably distinct and non-obvious over Sites and Tao, taken singly or in combination, and are thus allowable.

Independent claims 16, 18, 26, and 27 include similar limitations as claim 1, and so the above arguments apply with equal force to these claims. Thus, claims 16, 18, 26, and 27, and those claims respectively dependent thereon, are similarly patentably distinct

and non-obvious over Sites and Tao, taken singly or in combination, and are thus allowable.

Removal of the 103 rejection of claims 1-4, 9-19, and 23-27 is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

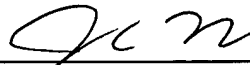
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested. If the Examiner has any objections to the particular language or choice of words used in the amended claims, Applicant respectfully requests a telephone interview to resolve these issues in a timely manner.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-36800/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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